

REMARKS

In response to the above-identified Office Action, no claims are amended, no claims are cancelled and no claims are added. Accordingly, Claims 1-31 are pending. Reconsideration and withdrawal of the rejections of record are requested in view of such amendments and the following discussion.

I. Claim Rejections Under 35 U.S.C. §103

The Examiner has rejected Claims 1, 6-9, 14-17, 22-25 and 27-31 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,140,314 issued to Stansfield et al. ("Stansfield"). Applicant respectfully traverses this rejection.

Regarding Claims 1, 9, 17 and 25, Claims 1, 9, 17 and 25 require the following analogous claim features, which are neither taught nor suggested by either Stansfield or the references of record:

purging memory, subsequent to said identifying, of the at least two digital images at the first resolution level;

retrieving, subsequent to said purging, overlapping areas of the at least two digital images at a second resolution level higher than the first resolution level based on the first overlap information; and

identifying second overlap information regarding where overlapping ones of the retrieved overlapping areas overlap at the second resolution level. (Emphasis added.)

According to the Examiner, the above-described features are taught with reference to col. 5, lines 1-10 of Stansfield. The section referred to by the Examiner refers to Claim 3 of Stansfield, which is described with reference to col. 3, line 1 through col. 4, line 10. After careful review of Claim 3, as well as the above-mentioned section of the detailed description of Stansfield, Applicant must respectfully disagree with the Examiner's contention.

In contrast to Claims 1, 9, 17 and 25, Stansfield describes a system and method, which enables the modification or retouching of certain areas of a final composite image without requiring assembling the final composite image by decompressing full images on the disk store 1 and assembling them in the image store 5 at the decompressed high resolutions. (See col. 3, lines 48-54.)

In order to achieve this goal, the areas to be modified are identified. Once identified, the relative offset between the tile arrays of the overlapping images is calculated and the tiles falling within the area or regions to be modified are located. For example, FIG. 3 illustrates two 8x8 tiles 20, 21 of respective images, which, in the final image, overlap by one pixel, as indicated at 22. The operator wishes to retouch a section including that overlapping region of 4x4 pixels indicated at 23 (See col. 3, lines 40-54).

However, in contrast to Claims 1, 9, 17 and 25, Stansfield requires that:

Microprocessor 9 then causes all tiles having portions falling within the region 23 to be modified to be downloaded from disk store 1 and decompressed by decompression circuit 2. (See col. 3, lines 65-68.)

These tiles 20, 21 are then consolidated or assembled in a conventional manner under the control of the microprocessor 9 (step 15) and the assembled version of these tiles is fed to the frame store allowing the assembled version to be displayed on the monitor. . . . Once all areas to be retouched or modified have been retouched and stored in the modified tile store 4, the microprocessor 9 causes the full image to be assembled. (col. 3, line 68 - col. 4, line 13.)

In other words, based on the cited passages above, although Stansfield describes the determining of an overlap region (e.g., region 22 of FIG. 3), the section with which the operator may want to retouch ("touch-up region") is not necessarily limited to the overlap region identified by Stansfield. As a result, when tiles having portions falling within the touch-up region are downloaded and decompressed, the touch-up region, for example, as illustrated with FIG. 3, will only include a portion of the overlapping areas of the digital images. In other words, Stansfield teaches the retrieval of tiles having portions falling within a touch-up region, e.g., region 23 of FIG. 3, which may or may not include portions of an overlap region or overlap area between images, e.g. (overlap area 22 of FIG. 3).

Applicant respectfully submits that although the touch-up area may include a portion of the overlapping area of two digital images, the retrieval of the touch-up region will certainly not include each overlapping area of the at least two digital images, as required by Claims 1, 9, 17 and 25.

Furthermore, Stansfield provides no teachings or suggestions with respect to identifying second overlap information regarding where overlapping ones of the retrieved overlapping areas overlap at the second resolution level, as required by Claims 1, 9, 17 and 25. Namely, once tiles having portions falling within the touch-up region are downloaded and decompressed, any further determination of such overlap between tiles of the second resolution level is neither taught nor suggested by either Stansfield or the references of record. As indicated by Stansfield:

These tiles 20, 21 are then consolidated or assembled in a conventional manner under the control of the microprocessor 9 (step 15) and the assembled version of these tiles is fed to the frame store 3 allowing the assembled version to be displayed on the monitor 7. The operator then modifies the assembled region in a conventional manner by using the digitizing table 10 to modify the color content of the frame store. Once a finally desired form for this region has been achieved, the relevant color content of the frame store 3 is stored in the modified tile store 4. (See col. 3, line 68 - col. 4, line 10.)

As further illustrated within Stansfield:

Once all areas to be retouched or modified have been retouched and stored in the modified tile store 4, the microprocessor causes the full image to be assembled.

Accordingly, Applicant respectfully submits that although Stansfield teaches the identification of first overlap information regarding where at least two digital images overlap at a first resolution level, any further identification of overlap between the two images at a second resolution level is neither taught nor suggested by Stansfield or the references of record, as required by Claims 1, 9, 17 and 25.

Moreover, as correctly pointed out by the Examiner, Stansfield does not teach or suggest purging the memory, as required by Claims 1, 9, 17 and 25. According to the Examiner, it would be obvious to one of ordinary skill in the art at the time the invention was made to purge the memory because it is well-known to purge memory of items when they are no longer needed to free-up the memory. Applicant respectfully disagrees with the Examiner's contention.

Furthermore, Applicant respectfully submits that one skilled in the art would not purge the memory of information regarding the overlap area or region, as well as the touch-up region, once all tiles having portion falling within region 23 are downloaded and decompressed by the decompression circuit. Applicant respectfully submits that such information may be required by the conventional techniques to consolidate or assemble the tiles, as indicated in Stansfield. In other words, Applicant respectfully submits that information regarding the touch-up region or overlap region may be required to perform consolidation or assembly in a conventional manner of tiles 20 and 21, as taught by Stansfield.

Therefore, Applicant submits that the combination of Stansfield and the skill in the art fails to teach each of the claim features of Claims 1, 9, 17 and 25, as indicated above. Furthermore, Applicant submits that one skilled in the art would not modify Stansfield to purge the memory of the touch-up regions or overlap regions following downloading and decompression of all tiles having portions falling within the overlap region, as suggested by the Examiner.

Accordingly, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness of Claims 1, 9, 17 and 25 over Stansfield in view of the skill in the art. Therefore, Applicant respectfully submits that Claims 1, 9, 17 and 25 are patentable over Stansfield, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 1, 9, 17 and 25.

Regarding Claims 6-8, Claims 6-8 depend from Claim 1 and therefore include the patentable claim features of Claim 1, as described above. Accordingly, Claims 6-8, based on their dependency from Claim 1, are also patentable over Stansfield, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 6-8.

Regarding Claims 14-16, Claims 14-16 depend from Claim 9 and therefore include the patentable claim features of Claim 9, as described above. Accordingly, Claims 14-16, based on their dependency from Claim 9, are also patentable over Stansfield, as well as the references of

record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 14-16.

Regarding Claims 22-24, Claims 22-24 depend from Claim 17 and therefore include the patentable claim features of Claim 17, as described above. Accordingly, Claims 22-24, based on their dependency from Claim 17, are also patentable over Stansfield, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 22-24.

Regarding Claims 27-31, Claims 27-31 depend from independent Claim 25 and therefore include the patentable claim features of Claim 25, as described above. Accordingly, Claims 27-31, based on their dependency from Claim 25 are also patentable over Stansfield, as well as the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 27-31.

The Examiner has rejected Claims 2, 10 and 18 under 35 U.S.C. §103(a) as being unpatentable over Stansfield in view of U.S. Patent No. 4,622,632 issued to Tanimoto et al. ("Tanimoto"). Applicant respectfully traverses this rejection.

As correctly pointed out by the Examiner, Stansfield does not disclose wherein each of the at least two digital images are stored at the first and second resolution levels, as required by Claims 2, 10 and 18. Accordingly, the Examiner cites Tanimoto to modify Stansfield to require the storage of images at different levels of detail because this would allow faster speed when desiring an image at a specific resolution. Applicant respectfully disagrees with the Examiner's contention.

To wit, Applicant respectfully submits that the teachings within Stansfield are specifically directed to teaching the storage of images in a compressed format in order to reduce data storage requirements for representation of digital images. Accordingly, Applicant respectfully submits that one skilled in the art would not modify Stansfield in view of Tanimoto since storing digital images at multiple resolution levels would increase data storage requirements for storing digital representations of images.

Applicant respectfully submits that Tanimoto fails to rectify the deficiencies attributed to Stansfield in failing to teach purging of memory, retrieving of overlapping image areas and identification of overlapping information of images at the second resolution level, as required by Claims 1, 9 and 17, as described above. Accordingly, Claims 2, 10 and 18, based on their dependency from independent Claims 1, 9 and 17, respectively, are also patentable over Stansfield, Tanimoto and the references of record.

Therefore, the Examiner fails to establish a *prima facie* rejection of Claims 2, 10 and 18 due to the Examiner's failure to show a teaching or suggestion for modification of Stansfield in view of Tanimoto. Accordingly, Claims 2, 10 and 18 are patentable over Stansfield, Tanimoto and the

references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 2, 10 and 18.

The Examiner has rejected Claims 3, 11, 19 and 26 under 35 U.S.C. §103(a) as being unpatentable over Stansfield in view of U.S. Patent No. 6,075,905 issued to Herman et al. ("Herman"). Applicant respectfully traverses this rejection.

As correctly pointed out by the Examiner, Stansfield does not disclose dividing each of the least two digital images into a plurality of areas at the second resolution level and storing the plurality of areas at the second resolution level in the memory to identify where the plurality of overlap at the second resolution level. Applicant respectfully submits that one skilled in the art would not modify Stansfield in view of Herman as suggested by the Examiner due to the fact that Stansfield provides no teachings or suggestions with respect to identifying overlap information at the second resolution level of the images.

In other words, as is described above, once initial overlap between images is determined at a first resolution level, Stansfield fails to teach or suggest determining additional overlap between images at a second resolution level. Accordingly, one skilled in the art would certainly not modify Stansfield with regards to determining overlap at a second resolution level since Stansfield is devoid of any teachings regarding overlap at the second resolution level.

Therefore, Applicant respectfully submits that Claims 3, 11, 19 and 26, based on their dependency from independent Claims 1, 9, 17 and 25, as well as the Examiner's failure to establish a teaching or suggestion for modifying Stansfield in view of Herman, renders Claims 3, 11, 19 and 26 patentable over Stansfield, Herman and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 3, 11, 19 and 26.

The Examiner has rejected Claims 4, 12 and 20 under 35 U.S.C. §103(a) as being unpatentable over Stansfield in view of U.S. Patent No. 6,011,558 issued to Hsieh et al. ("Hsieh"). Applicant respectfully traverses this rejection.

As correctly pointed out by the Examiner, Stansfield fails to teach or suggest use of edge detection technique to identify overlap information. Assuming, *arguendo*, that Stansfield could be modified to use an edge detection technique to determine image overlap, Stansfield would still fail to teach or suggest identifying overlap information between images at the second resolution level, as required by independent Claims 1, 9, 17 and 25.

Accordingly, Claims 4, 12 and 20, based on their dependency from independent Claims 1, 9 and 17, are patentable over Stansfield, Hsieh and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 4, 12 and 20.

The Examiner has rejected Claims 5, 13 and 21 under 35 U.S.C. §103(a) as being unpatentable over Stansfield in view of U.S. Patent No. 5,991,461 issued to Schmucker et al. ("Schmucker"). Applicant respectfully traverses this rejection.

As correctly pointed by the Examiner, Stansfield fails to teach or suggest identifying the coordinates of the overlap regions. Even assuming, *arguendo*, that Stansfield could be modified to identify coordinates of the overlap regions, such modification would still fail to teach or suggest identifying overlap information of the images at the second resolution level, as required by independent Claims 1, 9, 17 and 25.

Accordingly, Claims 5, 13 and 21, based on their dependency from independent Claims 1, 9 and 17, are patentable over Stansfield, Schmucker and the references of record. Consequently, Applicant respectfully requests that the Examiner reconsider and withdraw the §103(a) rejection of Claims 5, 13 and 21.

CONCLUSION

Applicant has amended the claims to recite features that are not taught or suggested by the references. No new matter is introduced by the Applicant's claim amendments, which are supported in Applicant's specification and are necessary for placing the present application in condition for allowance.

In view of the foregoing, it is believed that all claims now pending, namely Claims 1-31 patentably define the present application over the prior art of record, and are therefore in condition for allowance; and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207-3800, ext. 738

Respectfully submitted,

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CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on March 24, 2004.

Marilyn Bass

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